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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,446	10/26/2001	Shigeo Yoshida	11283-015001 / PH-1269US	7360
26211	7590	03/11/2004	EXAMINER	
FISH & RICHARDSON P.C. 45 ROCKEFELLER PLAZA, SUITE 2800 NEW YORK, NY 10111			MARSCHEL, ARDIN H	
			ART UNIT	PAPER NUMBER
			1631	

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/003,446

Applicant(s)

YOSHIDA ET AL.

Examiner

Ardin Marschel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 9-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-25 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

Applicant's election without traverse of Group I (claims 1-8) in the Paper filed 12/29/03 is acknowledged.

### **PRIOR ART**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vijg et al. [P/N 5,068,176]; taken in view of the legal decision of In re Venner [262 F.2d 91,95, 120 USPQ 193, 194 (CCPA 1958)].

Vijg et al. describes the electrophoretic separation of restriction fragments of DNA in two dimensions via electrophoretic separation in the abstract. This is further detailed in column 4, line 31, through column 8, line 68, wherein several analyses of genomic DNA are described utilizing 2-D electrophoretic methodology. The detection of mutations or abnormal or spot difference DNA sequence is also described therein as required in instant claims 1 and 7 as well as this being gene loci information as also

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claimed in instant claim 6. Flanking regions of the restriction recognition sites for various restriction enzymes are responsible for the observed fragment patterns as also shown in the Figures, such as Figure 4B, 6, and 9B – 10C and also cited in instant claim 2. One of the restriction enzymes utilized in the 2-D analysis of the reference is Hae III as cited in column 4, lines 61-66. Enclosed is page 8 of a Bethesda Research Lab. Catalog which describes that Hae III is methylation sensitive at its internal C residue of its recognition site as well as methylation insensitive at its 3'-C residue thus supporting the usage of such an enzyme as in both of instant claims 3 and 4. Vijg et al., however, does not disclose the usage of a computer program for the above methodology as instantly claimed.

The legal decision of *In re Venner* is cited as motivation and suggestion via legal precedent that the automation of a manual activity is obvious and thus motivated and suggested. This automation via computer program is thus made obvious over that of the Vijg et al. reference.

Thus, it would have been obvious to someone of ordinary skill in the art at the time of the instant invention to automate the manual activity of Vijg et al. as suggested and motivated by *In re Venner* to result in the practice of the instant invention.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vijg et al. [P/N 5,068,176]; taken in view of the legal decision of *In re Venner* [262 F.2d 91,95, 120 USPQ 193, 194 (CCPA 1958)]; taken further in view of Stevens et al. [P/N 5,776,767].

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The combination of Vijg et al. with In re Venner has been summarized above but does not described communications over a network (instant claim 5) or memorization of sequence data (instant claim 8)

In the abstract Stevens et al. summarizes the sequencing of DNA and the communication of such information over a network. Such a computer network stores the sequence information as data as shown in Figure 8 therein, for example. The BACKGROUND section in columns 1-3 of the reference describes the massive sequence data buildup in the art, especially motivated by disease detection. This reference thus motivates and suggests the networking communication of sequence data to those desiring its use and memorizing such sequences also for use as desired.

Thus, it would have been obvious to someone of ordinary skill in the art at the time of the instant invention to develop sequence information via an automatic computer program as in Vijg et al. in view of In re Venner and memorize and distribute such information motivated and suggested by Stevens et al. to result in the practice of the instant invention.

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (571) 272-0718. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (571) 272-0722.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (571) 272-0549.

March 8, 2004

  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER